



Digital Marketing and Effective Management to Expand the Processed Food Market for Micro, Small, and Medium Enterprises in Wanagiri Village, Bali

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A B S T R A C T

Micro, Small, and Medium Enterprises (MSMEs) in Wanagiri Village, Bali, hold significant potential to strengthen the local economy through diverse processed food products. However, limited digital marketing adoption and uneven managerial capacities constrain their market reach and competitiveness. This study evaluates the impact of digital marketing and effective business management on market expansion among processed food MSMEs in Wanagiri. Utilizing a quantitative approach, data were gathered from 20 actively participating MSMEs via structured questionnaires and analyzed using multiple linear regression. The empirical results indicate that both digital marketing ($p < 0.05$) and effective management ($p < 0.05$) positively and significantly affect market expansion. While digital platforms broaden promotional reach and customer engagement, effective management ensures operational stability, quality control, and order fulfillment. The findings underscore that digital marketing achieves optimal results when paired with robust business governance, providing key strategic insights for rural MSME development.

Contribution to Sustainable Development Goals (SDGs):

SDG 8: Decent Work and Economic Growth

SDG 9: Industry, Innovation and Infrastructure

1. INTRODUCTION

1.1. Research Background

Wanagiri Village, located in Sukasada District, Buleleng Regency, Bali Province, is one of the areas with considerable economic potential based on local products, particularly in the food and agricultural sectors [1]. Wanagiri is rich in local coffee, traditional snacks, various types of chips, herbal beverages, and animal feed products utilizing food-processing waste [2]. This product diversity not only shows the community's ability to turn raw materials into value-added products but also reflects culinary traditions passed down through generations. This potential has become increasingly relevant alongside growing public

awareness of health and the demand for products that are of higher quality, hygienic, and value-added [3].

Food production by micro, small, and medium enterprises (MSMEs) in Wanagiri Village has distinctive characteristics and market appeal [4]. However, conditions in the field indicate several challenges that hinder the optimization of this potential. Many MSME operators still rely on conventional production processes and have limited access to technological and managerial support [5]. Consequently, product quality, sanitation standards, and consistency do not always fully meet the demands of an increasingly competitive market. The food products produced are unique, such as local coffee with distinctive flavors, as well as traditional snacks and chips that have become part of the local consumption culture. However, without improvements in processing standardization and packaging, these products may



face difficulties in competing with similar products from other regions.

In addition to production and quality issues, marketing remains a major challenge for many MSMEs in Wanagiri [6]. Sales generally continue to rely on local markets, resulting in relatively limited market reach. MSME operators face difficulties in expanding their markets due to limited knowledge of modern marketing strategies, particularly digital marketing [7]. Consumer behavior has also changed, with many consumers increasingly using online platforms to search for food-related information, compare products, and discover new culinary experiences [8]. If MSMEs fail to adapt to technological developments, their opportunities to increase product visibility, attract a broader consumer base, and ultimately increase sales may remain limited [5].

Therefore, empowerment efforts are needed that focus not only on improving production capacity but also on strengthening marketing capabilities and business management [9]. This community development program supports food-processing MSMEs in Wanagiri Village. The program emphasizes business development strategy training, with a particular focus on the implementation of digital marketing. Participants are expected to be able to utilize social media, websites, and e-commerce platforms to promote their products more effectively. The training helps participants create attractive promotional content, apply appropriate product photography techniques, and build positive interactions with consumers. In addition to marketing, the program incorporates market analysis to help MSME operators identify changing market trends and consumer preferences.

This mentoring program is important because food-processing MSMEs in Wanagiri face several fundamental challenges, including limited business management knowledge, low product competitiveness due to suboptimal quality standards and packaging, and limited utilization of technology and digital marketing. Addressing these challenges is expected to enable MSMEs to develop sustainably, not only by increasing turnover and income but also by strengthening their managerial capabilities to operate their businesses more efficiently [10]. Ultimately, this community development initiative is expected to generate broader impacts for Wanagiri Village by strengthening the local economy, creating employment opportunities, and preserving local culinary heritage with high economic value.

1.2. Literature Review

1.2.1. Concepts and Development of Digital Marketing

Digital marketing refers to the process of designing, communicating, and delivering value to consumers through technology-based channels, including the internet, social media, search engines, and mobile devices [11]. In the context of modern business, digital marketing is considered capable of expanding market reach, increasing customer interaction, and enabling business operators to measure promotional effectiveness more systematically than traditional marketing approaches [12]. Various studies have shown that digital marketing adoption tends to improve marketing performance, particularly through increased brand visibility, customer base growth, and improved promotional strategies through content, digital advertising, and online services [13].

Among MSMEs, digital marketing is often considered a flexible approach that can be adapted to limited financial

resources [14]. Social media platforms such as Instagram, Facebook, and TikTok, as well as online marketplaces, provide relatively affordable channels for product promotion. However, digital marketing is not merely a matter of creating an account or uploading content; it requires a systematic strategy involving market segmentation, product positioning, marketing message design, consistent branding, and sustainable customer relationship management [12].

Digital marketing for processed food products has additional significance because such products are closely associated with quality, taste, food safety, and consumer trust [15]. Promotional content that highlights hygienic production processes, product ingredients, product benefits, customer testimonials, and nutritional or licensing information can strengthen business credibility. Marketing strategies must also emphasize consumer trust, which plays an important role in encouraging repeat purchases, particularly for products that consumers cannot directly evaluate before purchasing [12].

1.2.2. Effective Management in the Context of MSMEs

Effective management in MSMEs refers to the ability to plan, organize, direct, and control business activities to achieve organizational objectives efficiently [5]. In management literature, effectiveness is commonly associated with the achievement of targets, accuracy in decision-making, and the ability of an organization to adapt to changes in its business environment. Effective management is particularly important for MSMEs because these businesses often face challenges such as limited human resources, inadequate administrative capabilities, inconsistent financial record-keeping, and fluctuations in raw material availability [16].

Effective management is also closely related to marketing decision-making. Business owners, for example, need to determine which products should receive greater promotional attention, how to establish competitive prices, how to manage inventory to avoid stock shortages, and how to respond to market demand [7]. Marketing strategy is central to promotional success; however, its implementation requires support from effective operational management, including the ability to fulfill orders, maintain service quality, ensure product consistency, and handle customer complaints [17].

In the context of digital marketing, effective management includes the ability to develop a content calendar, establish campaign objectives such as increasing followers, generating sales traffic, or increasing order volume, monitor key performance indicators (KPIs)—such as engagement rates, conversion rates, and repeat order volumes—and systematically evaluate promotional ROI [18]. Previous studies have also emphasized that businesses with structured marketing management tend to achieve better outcomes than those that conduct promotional activities sporadically [19].

1.2.3. Relationship between Digital Marketing and Marketing Performance

Digital marketing adoption can improve marketing performance through several mechanisms, including increased reach, more frequent interaction, stronger brand awareness, easier access to product information, and faster transaction processes. Through digital channels, consumers can more easily discover products, compare similar products, and review reviews and testimonials.

These conditions can increase the likelihood of sales conversion, particularly for differentiated products [20].

For processed food MSMEs, marketing performance can be reflected in increased sales, customer growth, geographical market expansion, and more repeat purchases. In addition, digital marketing has the potential to strengthen customer loyalty through more intensive and personalized communication. In the context of e-commerce, responsive interactions such as providing prompt responses, detailed product information, and offers tailored to customer needs—can improve the customer experience and subsequently increase satisfaction and loyalty [21].

However, digital marketing does not automatically impact all MSMEs. Digital adoption may face several barriers, including limited digital literacy, inadequate knowledge of content strategies, difficulties in managing delivery processes, and challenges in producing content consistently [22]. Therefore, effective management plays a key role in ensuring digital marketing is implemented successfully. MSMEs need to allocate resources, establish appropriate work processes, and strengthen their internal capabilities to ensure that digital marketing activities operate effectively.

1.2.4. Expanding the Market for Processed Food Products

Market expansion among MSMEs can be understood as an effort to reach new customers beyond the traditional customer base by expanding distribution channels or consumer segments. In the processed food industry, market expansion may involve sales through souvenir shops, online orders, resellers, marketplaces, and digital ordering systems [15]. Consumer awareness of brands and product quality is an important factor; therefore, marketing strategies must clearly communicate product advantages [14].

Processed food products also possess unique characteristics that can serve as a basis for differentiation. These characteristics may be associated with local identity, distinctive flavors, regional raw materials, or cultural values. In many marketing studies, differentiation based on local uniqueness can drive brand value. When such differentiation is communicated through attractive digital marketing for example, through storytelling about production processes, the origin of raw materials, or local traditions consumers tend to respond more positively [12].

Digital marketing also supports market expansion through targeting capabilities. MSME operators can utilize paid promotional features, when financially feasible, or optimize content to ensure that products can be discovered by relevant consumers. For processed food products, consumers often have specific preferences regarding flavors, product variants, and packaging sizes. Therefore, providing complete product information through digital platforms can facilitate purchasing decisions [10].

1.1.1. Potential of Wanagiri Village, Bali

Wanagiri Village, as a tourism-oriented area in Bali, has considerable economic potential that can be strengthened through the development of processed food MSMEs. Processed food products often have promising market opportunities because tourists tend to seek souvenirs and distinctive local products [23]. The relationship between tourism and MSMEs indicates that increasing tourist demand can encourage MSMEs to innovate and strengthen their marketing strategies. However, challenges

commonly arise in maintaining product quality, production capacity, and the ability of MSMEs to expand distribution beyond periods of high tourist visitation [24].

Limited infrastructure and digital access in rural areas can represent initial barriers. Nevertheless, numerous studies have demonstrated that when MSMEs utilize technology appropriately, their market opportunities can expand significantly. Digital marketing enables MSMEs not only to sell to local consumers but also to reach consumers outside the region through online ordering systems [25]. Digital marketing supports market expansion by increasing brand visibility, improving access to product information, and enhancing promotional effectiveness. However, its impact becomes stronger when supported by effective management, including strategic planning, production and service management, performance recording, and promotional evaluation. In other words, effective management enables digital marketing to generate tangible business outcomes.

The theoretical implication of this study is to strengthen the view that digital transformation among MSMEs involves not only technology adoption but also governance and managerial capabilities. Its practical implication is to provide recommendations for MSMEs in Wanagiri Village regarding strategic steps for developing content and promotional activities, utilizing digital platforms for sales, and establishing work systems that enable businesses to fulfill market demand consistently.

1.3 Research Gap and Need for Further Research

Although the literature on digital marketing and MSME performance is extensive, a gap remains in research that specifically links digital marketing with effective management in the context of processed food products in rural areas associated with tourism destinations such as Bali. Many studies have examined digital adoption in general, but relatively few have explored in depth the managerial practices that determine whether digital strategies can actually result in market expansion. Therefore, this study addresses this gap by providing empirical evidence on the relationship between digital marketing, effective management, and market expansion among processed food MSMEs in Wanagiri Village.

2. MATERIALS AND METHODS

2.1. Research Design

This study employed a quantitative survey-based evaluation within a community development program to examine the relationships of digital marketing and effective management with market expansion among processed food MSMEs in Wanagiri Village, Bali. The quantitative component used a structured questionnaire administered to MSME operators, while the community development component included training and mentoring activities followed by a post-training assessment of participant understanding. This design combined empirical analysis of the proposed relationships with an evaluation of the community development intervention's immediate learning outcomes. The study was conducted in Wanagiri Village, Bali.

2.2. Population and Sample

The study population consisted of active processed food MSME operators in Wanagiri Village who met the inclusion criteria. Because the number of eligible MSMEs was limited, all 20

eligible MSMEs were included using total sampling. The inclusion criteria were: (1) the business operated in the processed food sector; (2) the business had been operating for at least one year; (3) the business had used at least one digital marketing channel, such as social media, an online marketplace, or WhatsApp; and (4) the business owner or operator was willing to participate as a respondent.

2.3. Variables and Research Instrument

The study involved three variables: Digital Marketing (X1), Effective Management (X2), and Market Expansion (Y). Data were collected using a questionnaire based on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The indicators were developed based on MSME business practices. Digital marketing included the use of digital platforms, content quality, customer responsiveness, and performance monitoring. Effective management included planning, organizing, controlling and evaluating business activities, as well as order and product quality management. Market expansion included increases in the number of new customers, orders or sales, geographical market reach, and distribution channels. Primary data were obtained by directly distributing questionnaires to respondents. Where necessary, brief verification was conducted by observing the MSME's digital accounts or promotional media.

2.4. Data Analysis

The study used three variables: Digital Marketing (X1), Effective Management (X2), and Market Expansion (Y). The data collection instrument consisted of a 1–5 Likert-scale questionnaire (ranging from “strongly disagree” to “strongly agree”). The indicators were formulated in accordance with the practices of micro, small, and medium-sized enterprises; for example, digital marketing includes the use of platforms, content quality, customer responsiveness, and monitoring of results; effective management includes planning, organizing, controlling/evaluating, as well as managing orders and product quality; market expansion includes increasing the number of new customers, increasing orders/sales, expanding geographic reach, and increasing distribution channels. Primary data were obtained by directly distributing questionnaires to respondents. When necessary, brief verification is conducted by observing the digital accounts and promotional media owned by micro, small, and medium-sized enterprises.

3. RESULTS AND DISCUSSION

3.1. Overview of Respondents and Business Conditions

This study was conducted among processed food MSMEs in Wanagiri Village, Bali. Respondents included business owners and/or managers directly involved in marketing activities and business operations. Based on the data collected, most MSMEs had already utilized digital channels, particularly social media and instant messaging applications such as WhatsApp, to communicate with consumers, promote products, and receive orders.

However, the intensity of digital marketing activities varied among MSMEs. Some businesses consistently produced promotional content and responded actively to customer inquiries, whereas others promoted their products only when they

had available time or when order volumes increased. This suggests that digital marketing readiness depends not only on access to technology but also on MSMEs' managerial capacity to manage marketing strategies and service processes.

Regarding effective management, the results showed that most respondents had carried out basic business activities such as production and customer service. However, practices related to target-based planning, performance recording, routine evaluation, quality control, and inventory management varied considerably. Some MSMEs responded effectively to market demand while maintaining consistent product quality. Others had not yet conducted formal evaluations of digital promotional effectiveness or utilized sales data as a basis for decision-making.

3.2. Descriptive Results of the Research Variables

Based on the post-test results completed by the participants, the training had a positive impact on their understanding of digital innovation and business management. All participants (100%) understood how to use marketplaces and the importance of production planning, and they expressed readiness to implement digital innovation and business management practices. As many as 90% of participants understood the importance of maintaining product quality and implementing marketing strategies. Meanwhile, 80% of participants understood the benefits of social media, digital promotion, and financial record-keeping. The lowest percentages were observed for understanding digital payments and digital innovation, each at 70%. These findings indicate that the training was effective, although the topics of digital payment and digital innovation require further reinforcement through continued mentoring. Figure 1 illustrates the training outcomes and participant readiness indicators.

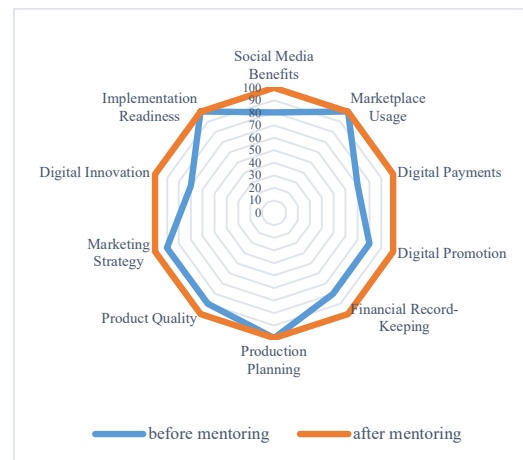


Figure 1. Digital Innovation and Effective Management for Expanding the Processed Food Market among MSMEs in Wanagiri Village

The results indicate that MSMEs had already undertaken digital promotional activities but still needed to strengthen their strategy and consistency. Indicators with relatively higher scores generally related to the ease of providing customers with product information, using digital platforms for promotion, and communicating with consumers. Meanwhile, relatively lower indicators were associated with the ability to monitor campaign outcomes, such as the number of orders generated after a

promotion, scheduled content management, and optimization of promotional features.

The effective management variable was also categorized from moderate to high. Prominent indicators generally involved the ability to manage production processes and fulfill customer orders. However, indicators such as sales recording, evaluation of marketing strategies, and data-driven decision-making showed greater variation among respondents. This variation matters because effective management drives digital marketing beyond promotional activities and ultimately contributes to improved business performance.

Meanwhile, the market expansion variable showed an increasing trend, particularly in terms of customer acquisition and the addition of sales channels, such as the transition from local sales to digital ordering. Nevertheless, market expansion remained constrained by the ability to reach more distant geographical areas and maintain consistent sales growth, particularly when production capacity or product quality had not yet been fully stabilized.

3.3. *Effect of Digital Marketing on Market Expansion*

The statistical analysis indicated that digital marketing had a positive and significant relationship with market expansion among processed food MSMEs in Wanagiri Village, Bali. This finding is consistent with the concept of digital marketing, which emphasizes the ability of digital platforms to increase promotional reach, expand consumer access, and facilitate transaction processes. Report the exact regression coefficient, t-statistic, and p-value in the regression results table to support this finding.

In practical terms, MSMEs that actively managed their digital accounts tended to attract greater attention from potential buyers. This was reflected in more conversations and orders after product uploads, the emergence of new consumers from outside the local area, and more frequent purchases. Digital marketing also helped build consumer trust by providing clearer product information, documenting production processes, sharing customer testimonials, and responding promptly to inquiries.

Furthermore, for processed food products, digital content that highlights product quality, including packaging, ingredients, and hygienic production processes, serves both as an educational tool and as a means of strengthening perceived product value. As a result, consumers may become more confident in trying and purchasing the products. Strengthening perceived value can contribute to market expansion by increasing new customers and expanding consumer segments.

3.4. *Effect of Effective Management on Market Expansion*

The analysis also indicated that effective management had a positive and significant relationship with market expansion. This indicates that MSMEs capable of managing their businesses systematically through planning, organizing, controlling, and evaluation tend to be more successful in expanding their markets. Report the exact regression coefficient, t-statistic, and p-value in the regression results table to support this finding.

Effective management contributes to market expansion through several mechanisms. First, business planning enables MSMEs to establish demand targets and adjust production

capacity accordingly. Second, control and evaluation enable businesses to assess promotional effectiveness, product suitability to market needs, and potential problems, such as delayed orders or inconsistent product quality. Third, task organization and service workflow management enable businesses to respond more quickly to customers, thereby improving the customer experience.

In the context of market expansion, new customers generally have higher expectations regarding the accuracy of product information and order fulfillment. MSMEs with effective management are better able to maintain consistent quality and service accuracy, increasing the likelihood of repeat purchases and recommendations. Customer recommendations represent a form of indirect promotion that can accelerate market expansion.

3.5. *Interaction between Digital Marketing and Effective Management*

The findings indicate that market expansion is stronger among MSMEs that not only utilize digital marketing but also implement effective management practices. This suggests that digital marketing functions as a “market attraction” strategy, while effective management serves as a “result reinforcement” mechanism. Without effective management, digital promotion may increase consumer interest but may not lead to stable sales growth because production, quality, or service problems can reduce customer satisfaction.

For example, MSMEs with active digital promotion but no clear inventory and production management systems may struggle to fulfil orders on time. Such conditions may reduce customer trust. In contrast, MSMEs with effective management can respond promptly to orders, maintain consistent quality, and provide complete product information. These conditions can increase customer satisfaction and potentially encourage customers to become repeat buyers. In the long term, customer satisfaction and trust can support sustainable market expansion.

Effective management also enables MSMEs to evaluate the performance of their digital marketing strategies. For example, businesses can identify which content types attract the most attention, which products sell fastest, or which posting and communication times are most effective. Thus, digital marketing can improve in quality and relevance rather than merely increasing the quantity of uploaded content.

3.6. *Implications for Processed Food MSMEs in Wanagiri Village*

Based on the results and discussion, several practical implications emerge.

1.1.2. *Strengthening digital marketing strategies*

MSMEs need to improve content consistency, clarify promotional messages, and provide more materials that communicate product value, including ingredient quality, hygienic production processes, product variety, and distinctive taste or packaging. In addition, prompt responses to customer inquiries should become part of the standard service.

1.1.3. *Improving evaluation-based effective management*

MSMEs are encouraged to maintain simple records of sales, the number of inquiries or orders generated after promotions, the

most demanded products, and operational problems encountered. These records can support more accurate, evidence-based decision-making.

1.1.4. Aligning promotional activities with operational capacity

Digital promotion should be aligned with production capacity and product availability. MSMEs need to organize production and packaging processes so that customer orders can be fulfilled on time. Consistent quality will strengthen consumer trust and encourage repeat purchases.

1.1.5. Utilizing market opportunities beyond the local area

Because digital marketing can expand market reach, MSMEs can target broader consumer segments by improving product information and streamlining the ordering process. MSMEs may also consider collaborating with local communities and product curators.

1.1.6. Research Limitations

This study has several limitations. First, the data were obtained through questionnaires and therefore depended on respondents' perceptions. Second, the sample consisted of only 20 MSMEs, reflecting the limited number of eligible active processed-food MSMEs in Wanagiri Village. Although total sampling was used, the small sample size may limit the statistical power of the regression analysis and the generalizability of the findings beyond the study setting. Third, differences in digital marketing activities and management maturity among MSMEs may have influenced the findings, meaning the observed relationships may not hold across all MSMEs. Fourth, the study was conducted during a specific period; therefore, market dynamics, including seasonal variations and changes in consumer trends, may not have been fully captured.

1.1.7. Directions for Future Research

Future studies could use a mixed-method approach, including in-depth interviews, to explore digital marketing strategies and management practices most effective for MSMEs. Further research could also incorporate additional variables, such as product quality, packaging innovation, community engagement, and digital literacy among MSME operators as supporting factors for market expansion. In addition, studies with larger samples and broader geographic coverage are recommended to improve the findings' generalizability. Comparative studies across different MSME categories, for example based on production scale or business age, could provide a deeper understanding of the strategies that are most relevant to different types of MSMEs.

4. CONCLUSION

Digital marketing plays an important role in expanding the market of processed food MSMEs in Wanagiri Village, Bali. Effective management also contributes to market expansion through more structured planning, organizing, controlling, and evaluation of business activities. The findings indicate that digital marketing supported by effective business management is associated with broader customer reach and improved market expansion. Therefore, digital marketing strategies and effective business management should be strengthened simultaneously to support

sustainable market expansion and improve the competitiveness of processed food MSMEs. Continued mentoring is also recommended, particularly in digital payments and digital innovation, which showed comparatively lower levels of participant understanding after the training.

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